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IN THE

Supreme Court of the United States

OCTOBER TERM, 1983

LETCHER T. WHITE,

Petitioner

v.

JEFFREY MINING MACHINERY COMPANY,
JEFFREY GALION, INC., and
DRESSER INDUSTRIES, INC.,

Respondents

PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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QUESTION PRESENTED

Has the Court of Appeals for the Federal Circuit established an unconstitutional standard of review of jury verdicts, by holding that it need not accord the deference to jury fact-findings that the Supreme Court has held is constitutionally required by the Seventh Amendment?

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OPINIONS BELOW

This petition seeks review of a decision of the United States Court of Appeals for the Federal Circuit, which is reported as *White v. Jeffrey Mining Machinery Company,* 723 F.2d 1553 (Fed. Cir. 1983). That decision reversed an unreported judgment by the United States District Court for the Eastern District of Kentucky, entered upon special verdicts submitted to a jury.

JURISDICTION

The decision of the United States Court of Appeals for the Federal Circuit was entered on December 7, 1983. That decision reversed a judgment in the amount of $12 million, plus attorneys' fees and interest from the date of the jury verdicts, on behalf of plaintiff-petitioner White against defendants-respondents Jeffrey Mining Machinery Company *et al.,* entered after jury trial on November 21, 1981 in the United States District Court for the Eastern District of Kentucky. Jurisdiction in the district and appellate courts lay under 28 U.S.C. §§ 1338 and 1295, respectively.

Rehearing and suggestion for rehearing *en banc* were denied by the United States Court of Appeals for the Federal Circuit on February 22, 1984. This Court has jurisdiction to review the judgment of the Court of Appeals under 28 U.S.C. § 1254(1).

CONSTITUTIONAL PROVISION INVOLVED

AMENDMENT VII

In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of common law.

STATUTE INVOLVED

35 U.S.C. § 103

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. . . .

STATEMENT OF THE CASE

1. Introduction

This case involves an appellate court's effective denial of the right to jury trial. Under the Seventh Amendment, facts found by a jury cannot be re-found by an appellate court, and a jury decision cannot be reversed (absent a reversible error of law) unless the court concludes, viewing all facts and inferences in the light most favorable to the prevailing party, that no reasonable person could have agreed with the jury.

In the present case, the Court of Appeals for the Federal Circuit stated that, notwithstanding Supreme Court authority to the contrary, it did not have to view disputed facts in a light favorable to the jury findings. Instead, the Court made extensive *de novo* fact-findings, without viewing the record and contrary to substantial evidence presented at trial. The issue presented by this case is whether the procedure for reviewing jury verdicts that the Federal Circuit has herein adopted can be permitted under the Seventh Amendment.

2. The Invention

On August 18, 1970, Letcher T. White, a resident of Kentucky who had been active for many years in the mining industry, received a patent from the United States Patent Office for a coal mining machine (U.S. Patent No. 3,524,680). The machine is based on an idea conceived by White in December 1965 and filed as a patent claim on October 22, 1968, after several years of work in perfecting and developing the idea.

In its preferred embodiment, the White patent discloses a longwall coal mining machine that can simultaneously cut and convey coal in underground coal seams. Longwall mining is a method of coal mining whereby the coal is completely extracted from a large underground area and, as the mining progresses along the coal seam, the roof of the mine collapses behind the machinery.[1]

Prior to the White invention, longwall mining required the use of three devices: (a) a plow or shearer, a cutting tool that was driven across the face of the coal seam, cutting a small portion of the exposed coal with each pass; (b) a conveyor to gather cut coal and remove it from the face of the mine; and (c) a hydraulic jack roof support system, to prevent cave-ins during operations. The problems inherent in using these devices include the following: (a) each device requires separate operating personnel, power sources, and maintenance; (b) extraction of an entire coal seam requires repeated passes by the plow or shearer; and (c) persons operating the plow or shearer are exposed for long periods to deadly coal dust and forced to work under poorly supported roof areas.

The White invention solves these problems by means of a radical departure from existing art. Under White's patent, the functions of all three previously existing devices are performed by a single machine that cuts and removes an entire block of coal in a single cutting and conveying cycle. The White invention uses hydraulic rams, connected to the roof support system, to force a series of augers with cutting bits attached, connected end-to-end and turned by motors, across the entire breadth and depth of the seam. The augers move directly forward into the seam, rotating and cutting coal from the mine face. A structure known as a scavenger board, supported by the hydraulic rams immediately behind the augers, catches and holds the coal fragments against the augers so that the cut coal is conveyed away from the face of the coal. The auger thus both cuts the mine face and conveys the cut coal through a

[1] In conventional or "room and pillar" mining, the entire roof of the mine is intended to remain standing throughout the excavation process, supported by a series of pillars of uncut coal.

trough formed by the scavenger board, the face of the coal, and the floor of the mine.

The chief practical accomplishments of this machine include a tremendous acceleration of the mining process, the elimination of auxiliary machines resulting in reduced original cost and personnel requirements along with simplified maintenance, and increased safety due to reduction in the number of persons exposed to coal dust and the period of exposure as well as to greater ease of adaptation to remote or computer operation.

The White patent was a combination of previously existing elements in the sense that augers, hydraulic rams, and backboards were all previously known to the mining industry. However, no previous inventor had conceived of combining these basic building blocks as the White invention does to eliminate the need for repeated passes at the coal seam or for auxiliary cutting or conveying devices.

Among the parties to whom White disclosed his idea, in confidence and with the explanation that he had a patent pending, was the Jeffrey Mining Machine Company ("Jeffrey"), the respondent in these proceedings.[2] Jeffrey retained copies of White's plans and drawings, which it received on July 10, 1970, but it did not contact White further.

In April 1972, at a trade show, Jeffrey introduced a mining machine, the 101-MC, that was substantially identical to the White invention.[3] The 101-MC proved to be popular and highly profitable. Chief Arentzen, Jeffrey's alleged designer,

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[2] The term "Jeffrey" will be used herein, as appropriate, to refer solely to the Jeffrey Mining Machine Company or jointly to that company and to Jeffrey Galion, Inc., and Dresser Industries, Inc., the related co-respondents in these proceedings. The Jeffrey Mining Machine Company is a wholly owned subsidiary of Jeffrey Galion, Inc., which in turn is a wholly owned subsidiary of Dresser Industries, Inc.

[3] The 101-MC is a "shortwall" or compact version of the longwall mining machine that was the preferred embodiment of White's patent. The major difference is that the shortwall machine does not connect as many augers end to end as the longwall.

subsequently claimed that he had independently conceived the 101-MC and fully developed it on paper within a 24-hour period. [4] Arentzen's alleged conception date was only 15 days earlier than the date of a meeting at which White had fully discussed his invention with Rolf Arentzen, the son of the Chief. [5]

3. The Trial

In August 1974, White filed suit against Jeffrey, claiming patent infringement and unfair appropriation of trade secrets disclosed in confidence. The case was tried before a jury. The trial took 22 trial days over a period of six weeks. It produced approximately 4,000 transcript pages, including more than 100 exhibits and the testimony of 17 witnesses, 15 of whom qualified as experts.

At trial, Jeffrey argued, *inter alia*, that the White patent was invalid under 35 U.S.C. § 103 for obviousness in light of the prior art, relying primarily on three preexisting patents, the Newton patent, U.S. patent No. 3,161,439, the Von Hippel patent, U.S. patent No. 3,445,139, and the Seidelbach patent, East German patent No. 20,646. White produced evidence, including expert testimony, that none of these patents embodied a machine that, like the White invention, could move laterally into the entire face of a coal seam, and cut and convey the coal without auxiliary devices.

In addition, White produced substantial evidence of the novelty and nonobviousness of his invention. In particular, White relied upon: (a) an expert witness who testified that the invention was nonobvious in light of prior art; (b) two government studies that concluded that the White invention was a valuable new idea that would increase productivity by 750% to 800%; (c) the fact that Jeffrey had obtained a patent for the 101-MC by arguing that the Newton patent did not

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[4] An expert witness later testified that preparation from scratch of the drawings and calculations relating to the 101-MC would take at least two months.

[5] Shortly after the date of this meeting, Rolf Arentzen was hired by Jeffrey to serve as a consultant in the development of the 101-MC.

render the invention obvious due to features common to the 101-MC and the White patent; (d) evidence that Jeffrey, in its advertising for the 101-MC, had described the basic idea, derived from White, of eliminating the auxiliary gathering and conveying devices, as "revolutionary"; (e) the commercial success of the 101-MC; (f) the presumption of validity arising from White's possession of a patent; (g) the fact that many industry experts had believed that White's idea was not workable; and (h) the fact that the alleged designer of the infringing device had misappropriated plans from White.

Both at the conclusion of White's case and upon completion of the trial, the trial judge denied Jeffrey's motions for a directed verdict that the White patent was invalid. The jury was given detailed instructions, to which no objection was made, concerning the issue of patent validity and in particular regarding the legal test and factual criteria for assessing nonobviousness. The Court's instructions directly followed *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966), regarding the three critical factual issues subsidiary to a determination about obviousness *(i.e.,* the scope and content of the prior art, differences between the prior art and the claims at issue, and the level of ordinary skill in the pertinent art). The Court also informed the jury in detail about the exacting standards for nonobviousness of a combination patent (*e.g.,* such patents must be "scrutinized with . . . care," must produce "an unusual or surprising result," and must "add to the total stock of knowledge" by creating a "synergistic result.").

As requested by Jeffrey (who had the statutory burden of proof and persuasion on the defensive issue of invalidity)[6] a number of special interrogatories were submitted to the jury, pursuant to Federal Rule of Civil Procedure 49(a). Among the special interrogatories were three questions relating to the nonobviousness of the White patent:

> **Interrogatory 4.** Would the differences between the mining machine as defined in Claims 1, 12, or 13 of the White '680 patent in suit and the prior art have

[6] 35 U.S.C. § 282.

been obvious at the time of White's alleged invention to a person having ordinary skill in the mining or mining machinery art? [7]

Interrogatory 9. Do any of the individual elements set forth in any of Claims 1, 12, and 13 of the White '680 patent in suit perform in the combinations or configurations claimed any new functions or different functions than those same elements performed in their earlier environments? [8]

Interrogatory 10. Do the combinations of elements or configurations of elements defined in Claims 1, 12, or 13 of the White '680 patent in suit produce new and unexpected results or new and unexpected functions? [9]

The jury answered "No" to Interrogatory 4 for all three of the above claims, under both the "clear and convincing evidence" and the "preponderance of the evidence" standards of proof. Thus, the jury found that the White patent was *not* invalid for obviousness. The jury answered "Yes" in all instances to Interrogatories 9 and 10, thus finding that the White patent claimed new or different functions and achieved new and unexpected results or functions in the claimed combinations.

Jeffrey also argued at trial that the 101-MC, as a shortwall mining device, did not infringe the White patent, which according to Jeffrey was limited to the preferred embodiment as a longwall miner. Since three of the claims relied upon at trial (Claims 1, 12, and 13) encompassed shortwall mining, however, this argument amounted to the assertion that the shortwall claims were not properly disclosed on White's patent application. White countered this argument with expert testimony

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[7] This question was based on language in *Graham v. John Deere Co., supra* at 17, 25-26.

[8] This question was based on language in *Lincoln Engineering Co. v. Stewart-Warner Corp.*, 303 U.S. 545, 549-50 (1938).

[9] This question was based on language in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Co.*, 340 U.S. 147, 152-53 (1951).

showing that these claims were within the patent. The trial judge submitted this issue to the jury by means of the following interrogatory, again requested by Jeffrey:

> **Interrogatory 5.** Do Claims 1, 12, or 13 of the White '680 patent in suit describe a mining machine not disclosed in the original application Serial No. 769,574 filed October 22, 1968?

The jury answered "No," thus finding that the White patent *did* disclose the claims advanced at trial. In reaching this verdict, the jury once again had the benefit of careful and thorough instructions from the bench:

> In considering Claims 1, 12 and 13 of the '680 Patent for compliance with the disclosure provisions of the patent laws, the jury shall read each of the claims in the light of the specification, drawings and other graphic illustrations incorporated therein to determine if the language of each claim is sufficiently definite and certain to distinctly claim and define the invention with such particularity and clarity that any person skilled in the art will be able to understand precisely that which is claimed by the invention and to distinguish between what is claimed to be new from that which was old or already known in the art characterized as the prior art.

By finding that claims 1, 12 and 13 were within the White patent, the jury also determined that all findings about these three claims, made in response to other interrogatories, were findings about a machine claimed by the White patent.

The jury awarded White damages of $8 million, and the trial judge, himself deciding the issue of punitive damages, increased the award to $12 million, plus interest and attorneys' fees, based on his findings that White, not Jeffrey, had invented the 101-MC and that Jeffrey had defrauded White and the general public by falsely presenting Arentzen as the inventor.

The trial court overruled Jeffrey's motions for a new trial and for judgment notwithstanding the verdict ("JNOV"). The trial court specifically held that, if the question of obviousness

was one of law, the Court adopted the jury's answers to interrogatories.

4. The Appeal

Jeffrey appealed the denial of JNOV to the Court of Appeals for the Federal Circuit, basing the appeal, in part, on the issue of the validity of the White patent. On December 7, 1983, the Court of Appeals issued an opinion reversing the verdict and vacating the award of damages on the ground that the issue of obviousness had not been properly submitted to the jury.[10] Following *Sarkisian v. Winn-Proof Corp.*, 688 F.2d 647 (9th Cir. 1982), *cert. denied,* 103 S.Ct. 1499 (1983), the Court held that the ultimate legal question of obviousness cannot be submitted to a jury. Rather, the Court concluded, only the subsidiary factual issues identified in *Graham v. John Deere Co., supra* (*i.e.,* scope and content of the prior art, differences between the prior art and the claims at issue, and the level of ordinary skill in the pertinent art) could be determined by the jury, and the trial court was required to make its own independent legal conclusion as to obviousness. The Court of Appeals held that the trial judge's adoption of the jury's findings did not qualify as an independent legal conclusion in light of the absence of subsidiary factual determinations by the jury.

The Court of Appeals admitted that, in light of its finding of error in submitting the issue to the jury, "it would, ordinarily, be appropriate to remand the case for factual findings." However, the Court claimed that there were no "substantial" factual disagreements between the parties on the three issues identified by *Graham v. John Deere Co., supra,* and accordingly decided to resolve the factual issues *de novo.* The Court concluded, *see* Appendix A at page 10a n.5, that Jeffrey's motion for JNOV should have been granted—but expressly refused to apply the standard that the Supreme Court has held is mandated by the Seventh Amendment for ruling on a JNOV motion:

> White argues that the court must view the evidence in the light most favorable to the party for whom the

[10] This opinion is attached hereto as Appendix A.

> jury found and must give that party the benefit of all reasonable inferences from the evidence in his favor, citing *Lavender v. Kurn,* 327 U.S. 645, 66 S.Ct. 740, 90 L. Ed. 916 (1946). The flaw in this argument is that the jury made no findings of fact on the record relating to the question of obviousness.

This decision was in direct conflict with the decision of the Court of Appeals for the Federal Circuit in *Connell v. Sears, Roebuck & Co.,* issued on November 23, 1983 and reported at 722 F.2d 1542. In *Connell,* the Court expressly rejected the reasoning of cases such as *Sarkisian* and held that submission of the issue of obviousness to the jury, with appropriate jury instructions as to the three factual issues identified in *Graham v. John Deere Co.,* is *not* reversible error. On December 21, 1983, the Court issued a revised opinion, apparently in light of *Connell,* in which it did a complete about-face on its legal theory while reaching the same result. [11] The revised opinion was largely a rewrite of the prior opinion, granting Jeffrey's motion for JNOV on grounds reworked to be more consistent with *Connell v. Sears.*

In the revised decision, the Court admitted that submission of the issue of obviousness to the jury was not reversible error and that the trial judge reached an independent determination of nonobviousness. However, the Court continued to hold, though on modified grounds, that White was not entitled to review of the jury's verdict under the constitutionally mandated standard of review:

> White argues that the court must view the evidence in the light most favorable to the party for whom the jury found and must give that party the benefit of all reasonable inferences in his favor, citing *Lavender v. Kurn,* 327 U.S. 645, 66 S.Ct. 740, 90 L. Ed. 916 (1946). The flaw in this argument is that the jury was not here required to evaluate the question of obviousness in light of the invention *as claimed,* so that the rule in *Lavender* cannot aid White. [Emphasis in original.] (Appendix B at page 9b, n.6).

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[11] This opinion is attached hereto as Appendix B.

The Court's conclusion that it was not bound to apply the standard of review normally required under the Seventh Amendment appears to be based on its own determination that the "invention as claimed" was not disclosed in White's patent. The opinion makes no attempt to square this determination with the contrary jury fact-finding on this issue. The Court's cryptic basis for rejecting White's important Seventh Amendment rights is thus without intelligible explanation in the opinion, but seems to proceed from a *de novo* factual determination that the White patent did not disclose a shortwall device.

Following its rejection of jury findings, the Court made its own evaluation of the factual record, culminating in the conclusion that the White patent was invalid for obviousness. In so doing, the Court asserted that "the parties are in substantial agreement on the facts bearing on the question of obviousness" (*i.e.,* the three factual inquiries identified in *Graham v. John Deere, supra*), relying on White's purported concession on brief that "the scope and content of the prior art as cited by Defendants is not an issue." (Appendix B at page 9B.)

In actual fact, the areas of supposed agreement cited by the Court were hotly disputed, not only on brief before the Court, but also at trial. The parties agreed as to the *sources* of prior art (the Newton, Von Hippel and Seidelbach patents, *et al.*). They disagreed sharply, however, through expert testimony as well as argument, about the significance of these sources,[12] including whether the prior art reflected the principal achievements of the White patent (*i.e.,* moving laterally into the coal face to both cut and convey the entire coal block without auxiliary devices and as part of a single cycle), and whether the level of ordinary skill in the art made possible simultaneous cutting and con-

[12] For example, White asserted, and Jeffrey denied, that the Newton device could not move laterally into a coal seam through the application of force at spaced points and would leave a wedge of coal in the center. White asserted, and Jeffrey denied, that the Seidelbach device could not cut the coal face. White asserted, and Jeffrey denied, that the Von Hippel device included a rigid backboard that would not collect coal. White asserted, and Jeffrey denied, that the prior art did not teach cutting the full face of a coal seam. These matters were examined at length in conflicting expert testimony and argument at trial.

veying without auxiliary devices and moving broadside into the breadth and depth of a coal seam to cut an entire block of coal in a continuous cycle.[13] In light of the vigorous disagreement, both at trial and on appellate briefing, about virtually all of the critical factual criteria relating to the question of obviousness, this basis for the Court's independent fact-finding is hard to fathom.

White petitioned the Court of Appeals for rehearing *en banc,* raising the Constitutional issue that the Court's express rejection of mandated JNOV standards followed by *de novo* fact-finding violated his Seventh Amendment right to a jury trial. The petition was denied on February 22, 1984.

REASONS FOR GRANTING THE PETITION

The Seventh Amendment right to a jury trial is a fundamental constitutional right of litigants. Critical to the protection of this right is the principle, embodied in the Seventh Amendment but disavowed by the Federal Circuit, that jury fact-findings are sacrosanct unless clearly unsupportable. A prevailing litigant is protected by the Seventh Amendment from appellate redetermination of jury fact-findings. Congress was concerned, in establishing the Federal Circuit, that the Court would be insufficiently sensitive to this constitutional right. It admonished the new Court to adhere to the deferential standard of review and to avoid applying to jury verdicts the independent factual review powers it has in patent office appeals.

The Federal Circuit in *White v. Jeffrey* clearly signaled its intent to avoid this specific congressional instruction and the mandate of the Seventh Amendment. After explicitly rejecting the applicability of the constitutional standard of review, the

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[13] The parties also disagreed about whether the White patent, which disclosed a longwall mining machine as its preferred embodiment, extended to shortwall mining devices such as the 101-MC. Despite the jury's express finding, in response to Interrogatory 5, that the White patent did disclose a shortwall device in light of Claims 1, 12, and 13, the Court of Appeals expressly found to the contrary in its *de novo* consideration of the evidence.

Court overturned specific jury verdicts and independently resolved many factually disputed matters contrary to the reasonable inferences supporting the jury verdicts, and in some instances contrary to the undisputed evidence. All patent litigants who exercise their Seventh Amendment right to a jury trial must now expect that, even if they prevail at trial (after what are typically lengthy and expensive proceedings), the jury findings may be unconstitutionally redetermined, based on a partial record, by an appellate court which did not hear the testimony or view the demonstrative evidence.

The Supreme Court should accept certiorari to restore litigants' Seventh Amendment rights in the Federal Circuit and to instruct that Court to apply the proper, constitutionally required, deferential standard of review to jury verdicts.

I. A JNOV Review Standard Was Required By the Seventh Amendment

The standard of review that a court must follow in ruling on a motion for judgment notwithstanding the verdict has long been undisputed.[14] As early as 1808, the Supreme Court held that, in ruling on a demurrer (a procedural forerunner to motions, as for a directed verdict or for JNOV, that seek to deny jury consideration of an issue), "the testimony is to be taken most strongly against [the moving party], and such conclusions as a jury might justifiably draw the court ought to draw."[15] The rule is now conventionally stated as follows:

> [A court is] bound to view the evidence in the light most favorable to [the nonmoving party] and to give it the benefit of all inferences which the evidence

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[14] It is equally clear that the same standard applies to an appellate court as to a trial court in ruling on a motion for JNOV. *See, e.g., Lovelace v. Sherwin-Williams Co.*, 681 F.2d 230, 237 n.5 (4th Cir. 1982); *Rosenberg v. Trautwein*, 624 F.2d 666, 669 (5th Cir. 1980); *C-Suzanne Beauty Salon, Ltd. v. General Insurance Co. of America*, 574 F.2d 106, 112 n.10 (2nd Cir. 1978); 9 C. Wright & A. Miller, *Federal Practice & Procedure:* Civil § 2524 (1971).

[15] *Pawling v. United States*, 4 Cranch 219, 221-22, 2 L. Ed. 601, 602 (1808).

> fairly supports, even though contrary inferences might reasonably be drawn.[16]

Appellate courts are required to apply this standard to the review of jury verdicts by the Seventh Amendment provision that "no fact tried by a jury, shall be otherwise reexamined in any Court of the United States, than according to the rules of the common law." *See, e.g., Tennant v. Peoria & Pekin Union Ry.*, 321 U.S. 29 (1944).[17]

The basis for the Federal Circuit's disavowal of the Seventh Amendment standard—that "the jury was not here required to evaluate the question of obviousness in light of the invention *as claimed*"—fundamentally misconceives the proper role of the reviewing Court under the Seventh Amendment, and leads directly to the Court's further error of *de novo* fact-finding in disregard of the jury verdict as a whole. Jeffrey argued vigorously to the trial and appellate courts that the White patent related only to longwall mining machines and that the 101-MC, as a shortwall machine, was outside the patent's disclosures. This factual dispute was explicitly resolved by the jury in White's favor when it answered Interrogatory 5 (requested by Jeffrey) to the effect that shortwall claims (Claims 1, 12, and 13) had been disclosed in White's patent application. The jury was correctly and over no objection from Jeffrey instructed as to the standard for determining what claims a patent discloses. Thus, in finding White's invention to be nonobvious, the jury *was* required to and *did* consider the

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[16] *Continental Ore Co. v. Union Carbide & Carbon Corp.*, 370 U.S. 690, 696 (1962) (footnote omitted). *See also, Brady v. Southern Railroad*, 320 U.S. 476, 479-80 (1943) (JNOV should not be granted unless "there can be but one reasonable conclusion as to the verdict . . ."); *Boeing Co. v. Shipman*, 411 F.2d 365, 374 (5th Cir. 1969) (". . . if there is substantial evidence opposed to the motions, that is, evidence of such quality and weight that reasonable and fair-minded men in the exercise of impartial judgment might reach different conclusions, the motions should be denied . . .").

[17] *See also Tiller v. Atlantic Coast Line Co.*, 318 U.S. 54 (1943); *Bailey v. Central Vermont Railway, Inc.*, 319 U.S. 350 (1943); *Lavender v. Kurn, supra; Atlantic & Gulf Stevedores, Inc. v. Ellerman Lines, Ltd.*, 369 U.S. 355 (1962).

invention "as claimed."[18] The Court's apparent determination, without any analysis of the evidence or the jury finding, that the claims did not encompass a shortwall machine was itself an unconstitutional invasion of the jury's fact-finding province.

II. The Federal Circuit Failed to Heed Congress' Direction That It Protect Litigants' Jury Trial Rights

When Congress enacted the Federal Courts Improvement Act of 1982, P.L. 97-164, newly creating the Federal Circuit and granting it exclusive jurisdiction over patent appeals, it specifically identified constitutional limitations on appellate review of jury verdicts, and expressed its concern that the Federal Circuit abide by them.

Neither the Court of Customs and Patent Appeals ("CCPA") nor the Court of Claims, from which the judges in the Federal Circuit were drawn, had used juries or been responsible for the review of jury verdicts. Thus, neither court had practiced or been bound to observe the constitutionally mandated standards for JNOV review. Congress found particularly significant the fact that the CCPA was used to making *de novo* fact-findings concerning patent validity in Patent and Trademark Office appeals based on its own expertise and that of experts working as technical advisors to the court. In the legislative history of the Federal Courts Improvement Act, Congress stated its concern that the prior experience of the CCPA would lead to improper *de novo* fact-finding in patent cases, beyond the powers of a federal appeals court:

> It is important to understand and appreciate the fundamental difference between the use of technical advisers by the Court of Customs and Patent Appeals judges in the ex parte appeals from the Patent and

[18] If the Federal Circuit meant to *reject* the jury finding in response to Interrogatory 5, it did not evaluate the evidence bearing on the jury verdict by the Constitutional standard. Indeed, it made no evaluation at all of the factual basis for the jury finding. If it meant to say that the jury was improperly instructed: (i) the instructions were offered by Jeffrey and Jeffrey made no challenge to them on appeal; and (ii) even if true the proper remedy is to remand for retrial, at which a proper instruction can be given. Improper instructions are not a ground for appellate fact-finding.

> Trademark office which they now consider and a similar type of help for judges who are called upon to resolve technical issues in adversary patent infringement cases of the kind that will now be heard by the Court of Appeals for the Federal Circuit. . . .
>
> [T]o use these advisers in adversary patent infringement cases and have them review and assess the technical aspects of the evidence, as developed by the sworn testimony of witnesses and as covered by the findings of fact entered by the trial judge, is quite a different matter [from their use in Patent Office appeals]. It is well established that factual issues in a patent case must be tried and decided by the trial judge or a jury in precisely the same manner as such issues are tried in any other kind of a lawsuit. The technical aspects of a patent case are factual issues, and patent cases are reviewed in the circuit courts of appeals in the same manner as with other appeals.[19]

The Federal Circuit's decision here demonstrates that the Congressional concerns were fully justified. Its rejection of the jury fact-findings and consequent *de novo* fact-finding and resolution of conflicting permissible inferences *against* White is tantamount to the review appropriate in Patent Office appeals. The Court's evident willingness to exceed its Congressional mandate threatens the proper allocation of functions between the jury and Appellate Court.

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[19] H.R. Rep. No. 97-312, 97th Cong., lst Sess. 37 (1981). The Report further explained, *id.* at 38, that the use of technical advisers to re-find facts *de novo* upon appeal would violate Constitutional principles of due process:

> It should be recognized that technical advisers will not be subject to cross-examination, as are experts called by the parties in an infringement action, and there will be no record of the process by which they evaluate and assess the technical aspects of the evidence covered by the trial court's findings or the jury's verdict. [Citing *Goldberg v. Kelly*, 397 U.S. 254, 269 (1969).]

III. The Federal Circuit's Mishandling of the Facts Demonstrates the Evil of De Novo Fact-Finding on Appeal

Under the JNOV standard required by the Seventh Amendment, the Federal Circuit should have examined whether, with respect to each factual issue confronting the jury, it was possible to have found for White, viewing the facts and inferences most favorably to him. Instead, the Court made its own fact-findings, resolving factual disputes in accordance with its own preferences and without heeding the constitutional standard. The Court explained its course with the propositions that the parties "appeared" to be in "substantial agreement," that 2 of the 15 expert witnesses "agreed in many respects . . ." on the facts relating to obviousness, and that the level of ordinary skill was not a point of "serious" disagreement.[20]

In fact, the parties did *not* agree, either at trial or on brief, as to the underlying facts. As Congress recognized, and as is implicit in the JNOV standard itself, the question for the Federal Circuit is not how it would decide the case on its view of the facts. The Court's rejection of the JNOV standard and its erroneous view that the facts were substantially undisputed led to a *de novo* fact-finding process that failed to view the evidence or reasonable inferences in a light favorable to White. The Court's handling of the factual disputes here vividly illustrates the evils of factual reconsideration of jury findings by the Federal Circuit.

The Court's Erroneous Fact-Findings

By way of example, the Court misinterpreted the evidence or refused to draw reasonable inferences in White's favor with respect to the teaching of the prior art patents, the nature of the claims of the White patent, and the relevance of the commercial success of the infringing device, the 101-MC.

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[20] In determining whether jury questions exist, the disagreements between the parties, not the agreements, are the important areas for analysis. By contrast, the Court apparently believes that substantial agreement on a number of issues entitles it to decide for itself the areas of disagreement.

The Prior Art Patents

— The Court said, *see* Appendix B, p. 10b, that Newton and the White patent were the same because the cutters at the ends of helices moved at 90° to the axis of the shaft. The Court fundamentally misunderstood the facts. Helices (and therefore the cutters attached to their ends) are *always* at 90° to the shaft of an auger. The significant difference is that Newton did not cut at 90° to the entire face of the seam, but instead in the path of an arc. Because it did not cut at 90° to the seam, it could cut only in a stop and go process, unlike the White machine, which operated in a continuous cycle, either cutting or conveying or both. This difference was a major contributor to the increased productivity of the White machine.

— At page 6b, the Court made a statement about the working of the Newton device that was contrary to undisputed evidence. According to the Court, referring to the diagrams, the device's arms moved "from the position shown in Figure A to that shown in Figure B." Figure A was an artist's rendition, depicting the device in a position from which witnesses for both parties agreed at trial, without contradiction, that the device could not cut the face of the coal.[21]

— At page 10b, the Court found that the Seidelbach device, cited by Jeffrey as prior art, could move laterally into a vein of coal, purportedly based on the "uncontradicted testimony" of Jeffrey's expert witness. In fact, however, the cited expert explicitly agreed on cross-examination that the Seidelbach device could cut only where it had its helices.[22]

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[21] Based on this erroneous view, the Court found, at page 10b, that the Newton device could move laterally into a coal face, asserting as well that White "cites no expert testimony" to the contrary. In fact, however, expert testimony presented by White at trial made clear that Newton was not designed to, nor could it, move laterally into the coal face.

[22] Since the center of the Seidelbach machine was comprised of a cowling, protecting the central conveyor, that was flush with the helices' cutting edge, the uncut center of the coal vein would prevent the machine from moving laterally into the vein.

— At pages 10b-12b, the Court found the White patent obvious by combining the Newton patent with other prior art references. There was *no* evidence at trial from any witness that it would have been obvious to combine Newton with the teachings of the other references. Jeffrey acknowledged the absence of such evidence on brief to the trial court and stated that it was not arguing that the Newton patent should be combined with other references.[23]

The Claims of the White Patent

— At page 11b, the Court called it "irrelevant" that prior art required auxiliary conveying devices, "because the [White] claims do not rule out additional elements, such as the screw conveyor." This ignored substantial evidence at trial, including in-house memoranda and advertising by Jeffrey relating to the 101-MC, that all prior art, but not the White invention, *required* auxiliary devices. Indeed, the statement demonstrates how fundamentally the Court misunderstood the facts. The White claims eliminated the need for auxiliary conveyors, such as the Newton screw conveyors, because the cutting augers in conjunction with the scavenger board also conveyed cut coal. This elimination of auxiliary parts was a principal reason for the dramatic increase in safety and productivity that the White patent made possible.

— At page 11b, the Court found it to be "irrelevant" that White's machine featured a novel use of a vertically moving mining head in conjunction with the vertically extensible backboard to permit mining the entire height of a coal seam in a single cutting and conveying cycle. The Court based this conclusion on the statement that a vertically moving head "is not required by the [White] claims." However, since it was disclosed explicitly by the

[23] Defendant's Reply Brief to the Trial Court on its Motion for JNOV, pages 10 and 17.

specifications, and because the limitation of the vertically extensible backboard disclosed it implicitly in the claims,[24] it was a relevant part of the invention as a whole with respect to which obviousness had to be considered by the jury. [25]

— The Court stated at 10b that the "only difference argued is that the Newton *et al.* machine does not move the helix *laterally* into the vein of coal." The Court incorrectly stated that other differences argued were not part of the claim (see n.7), ignoring the limitation that force be applied at spaced points along the shaft. This difference was clearly stated in the claims (at 1554 and n.2 and n.3). Newton did not apply force at spaced points along the shaft, but instead to a point behind the pivot on each arm.

— At page 11b, the Court found that "White's evidence relating to recognition of his invention by those skilled in the art as an improvement is not directed to the machine defined by the claims in issue." In fact, however, this evidence unambiguously related to the White patent (though to its longwall rather than to its shortwall embodiment). The features noted as improvements by the governmental studies and by Jeffrey's own in-house memoranda—the elimination of auxiliary conveying devices and the combination of cutting and conveying into one unit—were common to the shortwall and longwall embodiments.

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[24] There would have been no reason to extend a backboard vertically unless the cutting head moved vertically.

[25] The specifications are clearly relevant to the determination of the invention, as the Supreme Court held in *United States v. Adams*, 383 U.S. 38, 49 (1966):

> While the claims of a patent limit the invention, and specifications cannot be utilized to expand the patent monopoly, [citations omitted] it is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention.

The Infringing Device

— The Court stated at page 11b: "That Jeffrey's miner enjoyed commercial success does not support an implication that the jury found that a nexus existed between such a success and the claimed invention, because the Jeffrey machine included several features not disclosed or claimed in the White patent." [26] In fact, the jury found that the 101-MC was based "in all essential respects" on confidential disclosures by White. Moreover, the evidence showed that Jeffrey's advertising emphasized features, and its argument to the Patent Office distinguishing the 101-MC from Newton relied on features, common both to White's device and to the 101-MC. [27]

The Court also directly overturned express findings of fact by the trial court.[28] Notwithstanding the use of a jury, the trial court was called upon to make findings of fact in two instances. *First,* in ruling on Jeffrey's motion for JNOV, and in order to avoid the need for a remand in the event of a holding on appeal

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[26] The commercial success of a patented idea was recognized as evidence of the nonobviousness of that idea in *Graham v. John Deere Co., supra* at 17.

[27] The Court also ignored the inferences that the jury could properly have drawn from evidence adduced by White that experts were initially skeptical that the White invention would work. It is established that expressions of disbelief by experts constitute strong evidence of nonobviousness. *United States v. Adams, supra* at 52; *Environmental Designs Ltd. v. Union Oil Co.,* 713 F.2d 693 (Fed. Cir. 1983).

[28] In general, an appellate court cannot reverse independent fact-findings by a trial court unless those findings are found to be "clearly erroneous." Federal Rule of Civil Procedure 52(a). This standard recognizes the importance of giving "due regard . . . to the opportunity of the trial court to judge of the credibility of the witnesses." Rule 52(a). *See Pullman-Standard v. Swint,* 456 U.S. 273 (1982), in which the Supreme Court explained the importance of this rule and held that appellate courts cannot ignore the Rule 52(a) standard, even with regard to what are arguably questions of ultimate fact or mixed law and fact, when the only disagreement between the trial and appellate courts relates, not to underlying legal principles, but to questions of pure fact. In the present case, the Federal Circuit's reversal of the trial court findings was based solely on factual issues which the trial court had the better opportunity to judge.

that the question of obviousness could not be submitted to a jury, [29] the trial court stated, with regard to obviousness, that "the Court adopts the answers to the interrogatories by the jury on that issue." [30] *Second,* in awarding punitive damages (plus interest and attorneys' fees), the trial court ruled that White, rather than Chief Arentzen, was the designer of the 101-MC and that Jeffrey had defrauded White and the public. [31] Thus when the Federal Circuit reversed judgment, it in effect substituted its own second-hand view of a partial record for the consistent findings of both fact-finders who heard the 22 trial days of evidence.

* * * * *

In summary, the Court's factual review was plainly inconsistent with a JNOV standard of review, and constituted *de novo* fact-finding that was against the weight of the evidence. *First,* there clearly were extensive factual disputes between the parties relating to all of the critical facts subsidiary to obviousness. Thus, the Court's starting point for engaging in *de novo* fact-

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[29] The Federal Circuit did not resolve whether the question of obviousness could be submitted to a jury until *Connell v. Sears, supra,* decided in November 1983, held that submission of the question of obviousness to a jury *is* proper. Prior to *Connell v. Sears,* the issue had not been decisively settled by the circuits. *Compare Tights, Inc. v. Acme-McCrary Corp.,* 541 F.2d 1047 (4th Cir. 1976), *cert. denied,* 429 U.S. 980 (1976), (submission of the question of obviousness to a jury *held* permissible in the Fourth Circuit); with *Sarkisian v. Winn-Proof, supra* (submission of the question of obviousness to a jury *held* improper in the Ninth Circuit).

[30] The Court of Appeals agreed that the trial court's holding with regard to obviousness constituted an independent determination of the issue. Appendix B at 9b.

[31] It is well established that the breach of a confidential disclosure by one who misuses the disclosure to obtain his own patent constitutes strong evidence that the content of the disclosure, as embodied in a patent by the true inventor, was nonobvious. *See Kurtz v. Belle Hat Lining Co.,* 280 F. 277, 281 (2nd Cir. 1922) ("The imitation of a thing patented by a defendant, who denies invention, has often been regarded . . . as conclusive evidence of what the defendant thinks of the patent, and persuasive of what the rest of the world ought to think"); *Tights, Inc. v. Acme-McCrary Corp., supra* at 1558 ("As clear as any evidence addressed at trial that the Rice Patent was not obvious within the meaning of § 103 is the response of Kayser-Roth itself . . .").

finding was devoid of merit. [32] *Second,* the Court contradicted the jury findings in a manner inconsistent with the constitutionally mandated standard for JNOV. The Court both resolved factual disputes in a manner contrary to the verdict and refused to draw reasonable supporting inferences. *Third,* even absent a JNOV standard the Court's findings of fact would be unsupportable, since the Court repeatedly misstated the record and drew conclusions contrary to undisputed facts.

IV. Supreme Court Review Is Required To Secure Seventh Amendment Rights In the Federal Circuit.

The Federal Courts Improvement Act conferred on the Federal Circuit exclusive jurisdiction over patent litigation. Although there cannot, therefore, be any conflict in the Circuits, the importance of the Federal Circuit position is magnified because it applies throughout the country. Consequently, the Court's invasion of the Seventh Amendment here has universal

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[32] The Court stated that it was resolving the issue of obviousness, instead of remanding the case, in the interest of judicial economy. Appellate courts that have greater experience and awareness regarding the limitations on their fact-finding power have generally resisted this temptation to purchase judicial economy at the expense of a litigant's Constitutional right to jury trial. *See Roberts v. Sears, Roebuck & Co.,* 723 F.2d 1324, 1343 (7th Cir. 1983), in which the Seventh Circuit, acting *en banc,* rejected an appellant's suggestion that it engage in *de novo* fact-finding instead of remanding a jury-tried patent case. The Court explained:

> Although, from the record we have before us, we might be able, after reviewing and weighing the evidence, to arrive at what we consider to be the correct decision on anticipation and obviousness, we would have to find certain facts, as well as determine and apply the law. We believe that the judicial dispute resolution system established by our Constitution should not be infringed by the *ad hoc* shortcut of dispensing with trial judge and jury. In light of this constitutional system and the judicially-created doctrines that relegate an appellate court to its proper role in the system, Sears' arguments on the extent to which we may examine and evaluate the conflicting evidence afford no basis for this court to proceed further. We do not intend as a court to make a jury's factual decisions. It is elementary that the documentary evidence rule cannot be invoked in a case, such as this, in which technical experts have been used to interpret and clarify the structures, operations, and functions of the prior art and the patent in suit.

applicability with respect to patent litigation. Its impact is not limited or subject to clarification through rulings in other Circuits.

The concern of Congress that the new Court would be inclined improperly to treat jury appeals as though they were Patent Office appeals, thus according them improper deference, has already been noted. The procedure followed here suggests that the Federal Circuit is headed in the wrong direction and does not understand the intent of Congress or the requirements of the Seventh Amendment. Its cursory and ill-conceived rationale for disregarding the jury findings and its clear mishandling of the factual analysis demonstrate a pronounced insensitivity to and misunderstanding of constitutional jury trial rights.

The Supreme Court has emphasized the special unsuitability of patent cases for freewheeling appellate fact-finding, and the importance in such cases of respecting the superior perspective of the fact-finder at trial. *See Graver Tank & Mfg. Co. v. Linde Air Products Co.,* 336 U.S. 271 (1949), in which this Court reversed an appellate court for failing to observe Rule 52(a) with respect to facts found by a trial court. As the Court in *Graver* observed, *see* 336 U.S. at 274-75, there is "no type of case" to which the limitations on appellate review of the facts are "more appropriately applicable" than to a patent case, where the facts are illuminated at trial by extensive expert testimony and live demonstrations of the devices at issues.[33]

The Supreme Court has not hesitated in the past to vindicate the JNOV standard when lower courts have invaded juries' prerogatives by granting motions for JNOV on insufficient grounds.[34] The present course of the Court of Appeals

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[33] The present case involved testimony by 17 witnesses, 15 of whom qualified as experts. In addition, the jury and trial court had the opportunity to view an example of the infringing 101-MC, along with other scale model exhibits.

[34] This Court has repeatedly reversed decisions by lower courts granting JNOV, and restored the effect of jury verdicts, when the lower courts failed to apply the proper standard. *See, e.g., Gardner v. Michigan Central Railroad Co.,* 150 U.S. 349 (1893); *Delk v. St. Louis & San Francisco Railroad Co.,*

(footnote continues)

for the Federal Circuit requires immediate correction. Unless this petition for certiorari is granted and the decision reversed, the Court will have license to engage in fact-finding *de novo,* without regard for the Constitutional restrictions on its role. The Court's present course results in fundamental harm, not only to individual inventors such as White who are victimized by the Court's *de novo* fact-finding, but also to the fair and consistent application of the patent laws.

(footnote continued)

220 U.S. 580 (1911); *Tiller v. Atlantic Coast Line Co.,* 318 U.S. 54 (1943); *Bailey v. Central Vermont Railway, Inc.,* 319 U.S. 350 (1943); *Tennant v. Peoria & Pekin Union Ry., supra; Lavender v. Kurn,* 327 U.S. 645 (1946); *Atlantic & Gulf Stevedores, Inc. v. Ellerman Lines, Ltd.,* 369 U.S. 355 (1969); *Continental Ore Co., supra; Perkins v. Standard Oil Co. of California,* 395 U.S. 642 (1969).

CONCLUSION

The Federal Circuit's opinion here makes plain that patent litigants face the prospect of appellate redetermination of factual issues found favorably to them by the jury. The Federal Circuit in *White v. Jeffrey* clearly expressed its intent to act as independent fact-finder on critical factual issues relevant to obviousness. If its decision is not corrected by the Supreme Court, the Federal Circuit will have carte blanche to overturn jury fact-findings and the trial court's conclusion of patent validity, based on its own view of disputed factual criteria related to the obviousness issue. To protect the Seventh Amendment right to a jury trial, and to instruct the Federal Circuit on the proper review of jury verdicts, the Supreme Court should issue a writ of certiorari to review the Federal Circuit's decision in *White v. Jeffrey*.

Respectfully submitted,

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APPENDIX A

IN THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

LETCHER T. WHITE,

Appellee,

v.

JEFFREY MINING MACHINERY COMPANY,
JEFFREY GALION, INC.,
and DRESSER INDUSTRIES, INC.,

Appellants.

Appeal No. 83-640.

DECIDED: December 7, 1983

Before DAVIS, *Circuit Judge,* NICHOLS,* *Senior Circuit Judge,* and MILLER, *Circuit Judge.*

MILLER, *Circuit Judge.*

This is an appeal from the United States District Court for the Eastern District of Kentucky. Plaintiff-appellee White sued Jeffrey Mining Company, et al. ("Jeffrey") for infringement of claims 1, 12, and 13 of his United States Patent No. 3,524,680 for a mining machine.[1] After a jury trial, the patent claims in issue were held valid and infringed. The jury awarded White $8 million, which was increased to $12 million by the trial judge. We reverse on the validity of the patent claims and vacate the award of damages. The issue of infringement is not raised on the appeal.

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* Judge Nichols assumed senior status effective October 1, 1983.

[1] Issued August 18, 1970, on application No. 769,574, filed October 22, 1968, for "Mining Machine Having Spiral Cutters With Scavenger Board."

BACKGROUND

White originally brought suit in 1974 against Jeffrey for infringement and for unfair competition arising from development and sale of Jeffrey's 101MC mining machine. Claim 1 is illustrative:

> A mining machine comprising
>
> a shaft
>
> having a helix thereon
>
> provided along the edge thereof at spaced points with cutting elements,
>
> means for driving said shaft,
>
> means for applying force laterally of said shaft at spaced points therealong to move it laterally into a vein of coal to cut the latter,
>
> a rigid scavenger board at the side of said helix opposite the vein of coal and longitudinally coextensive with said helix,
>
> and bearings for said shaft
>
> having mechanical connection with said scavenger board whereby the latter moves laterally with said shaft.

Claim 12[2] further defines the scavenger board as a pair of overlapping flat plates vertically slidably connected to each other, the board forming with the floor of the mine and the vein

---

[2] Claim 12 provides:

> A mining machine comprising
>
> a shaft
>
> having a helix thereon
>
> provided along the edge thereof at spaced points with cutting elements,
>
> means for driving said shaft,
>
> means for applying force laterally to said shaft at spaced points therealong to move it laterally into a vein of coal to cut the latter,

(footnote continues)

of coal a trough in which the helix acts as an auger conveyor to move coal endwise of the trough. Claim 13[3] requires that the scavenger board comprises relatively vertically movable elements having a lower edge resting on the floor of the mine.

(footnote continued)

a scavenger board arranged at the side of said helix opposite the vein of coal,

said scavenger board comprising a pair of overlapping flat plates vertically slidably connected to each other,

the upper of said plates having mechanical connection with said shaft to move therewith as said helix advances into the vein of coal,

said scavenger board forming with the floor of the mine and the vein of coal a trough in which said helix acts as an auger conveyor to move coal endwise of said trough.

[3] Claim 13 provides:

A mining machine comprising

a shaft

having a helix thereon

provided along the edge thereof at spaced points with cutting elements,

means for driving said shaft,

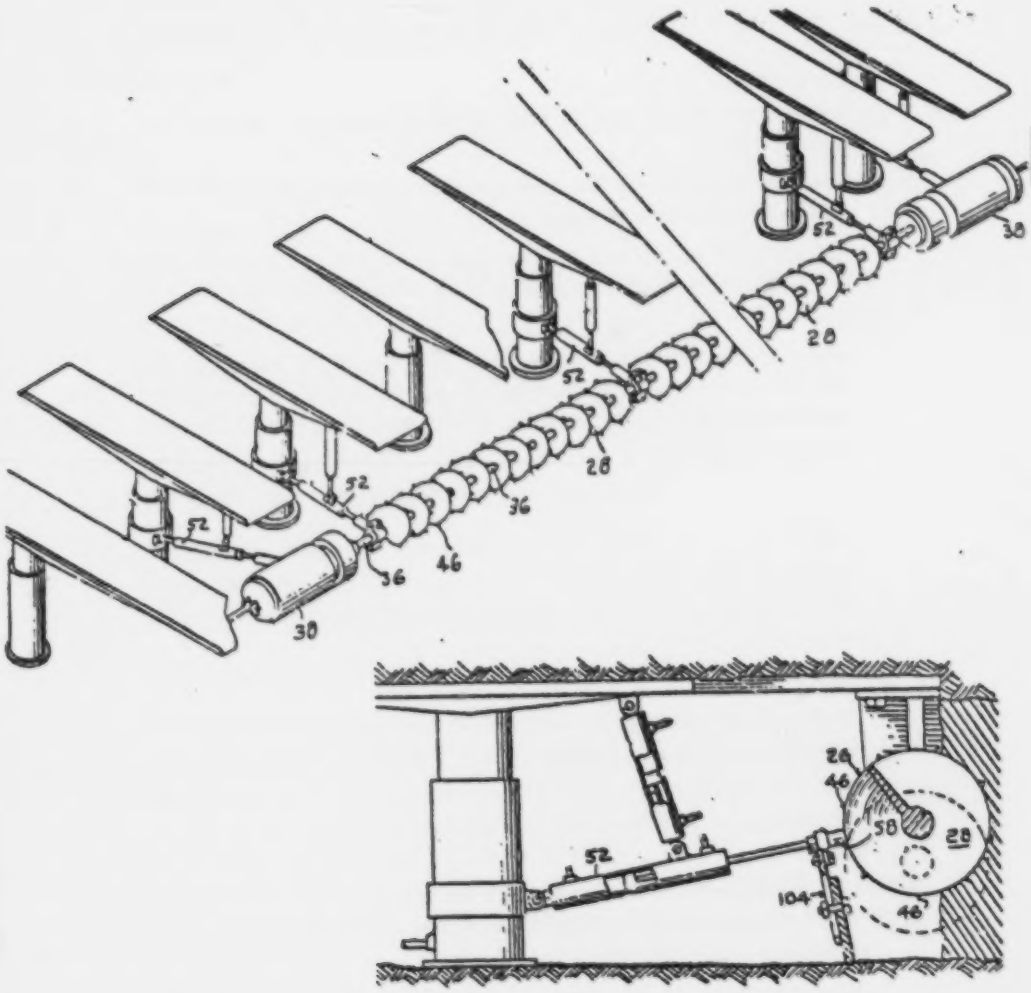
means for applying force laterally to said shaft at spaced points therealong to move it laterally into a vein of coal to cut the latter,

and a scavenger board comprising relatively vertically movable elements and having a lower edge resting on the floor of the mine,

said scavenger board, the floor of the mine and the vein of coal forming a trough in which said helix acts as an auger conveyor to move coal longitudinally of said trough,

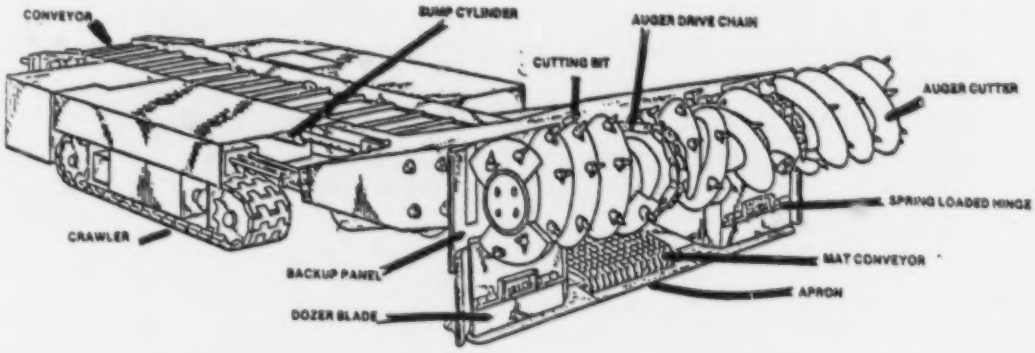
said scavenger board having mechanical connection with said shaft and with said means for applying lateral force to said shaft whereby said scavenger board will be moved with said shaft as the latter advances to cut into the vein of coal.

The White invention is illustrated in the patent, thus:



Shaft 36 has a *helix* 28 thereon with *cutting elements* 46 provided at spaced points. Motors 38 provide *means for driving* the shaft. Hydraulic rams 52 apply *lateral force* to move the helix laterally into a vein of coal. A *scavenger board* 104 is on the side of the helix opposite the vein of coal and forms with the floor of the mine and the vein of coal a *trough* in which the helix acts as an *auger conveyor* to move coal endwise of the trough. The illustrated embodiment is a "longwall miner."

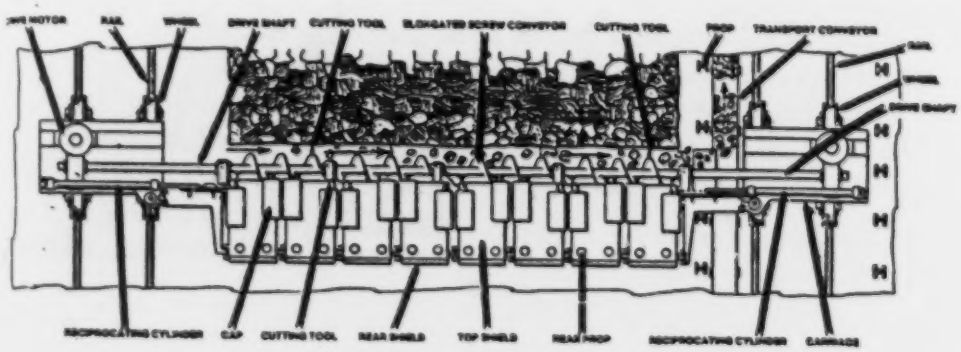
The accused 101MC miner is illustrated as follows:



THE PRIOR ART

United States Patent No. 3,445,139 to Von Hippel teaches a longwall miner having a helical cutter that acts as an auger to move coal endwise of the helix, as shown below:

VON HIPPEL



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United States Patent No. 3,161,439 to Newton et al. discloses a continuous miner having a helical cutter on the end of each of two arms. When cutting, the arms swing in an arc from the position shown in figure A to that shown in figure B. The cut coal is confined by a cuttings confining plate and a scraper blade (see figure C). The helical cutters "advance the mined material rearwardly" into the path of the screw conveyors that, in turn, move it to the central conveyor. A subsequent cut would follow the dotted line in figure B.

NEWTON ET AL.

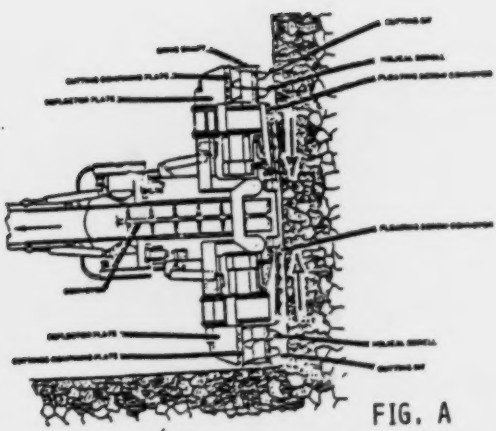


FIG. A

FIG. B

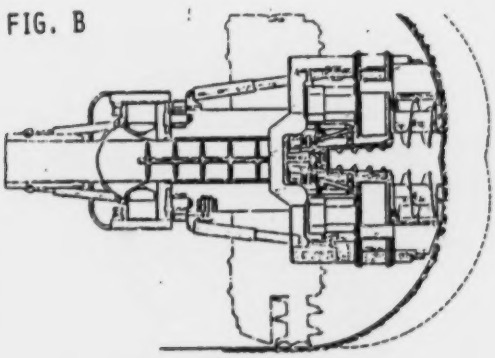
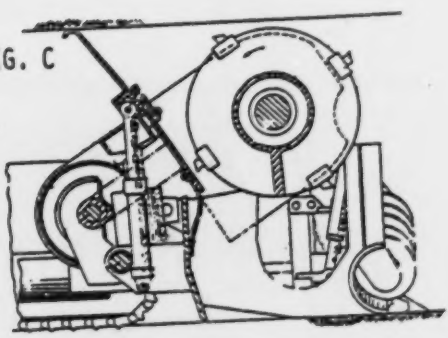


FIG. C



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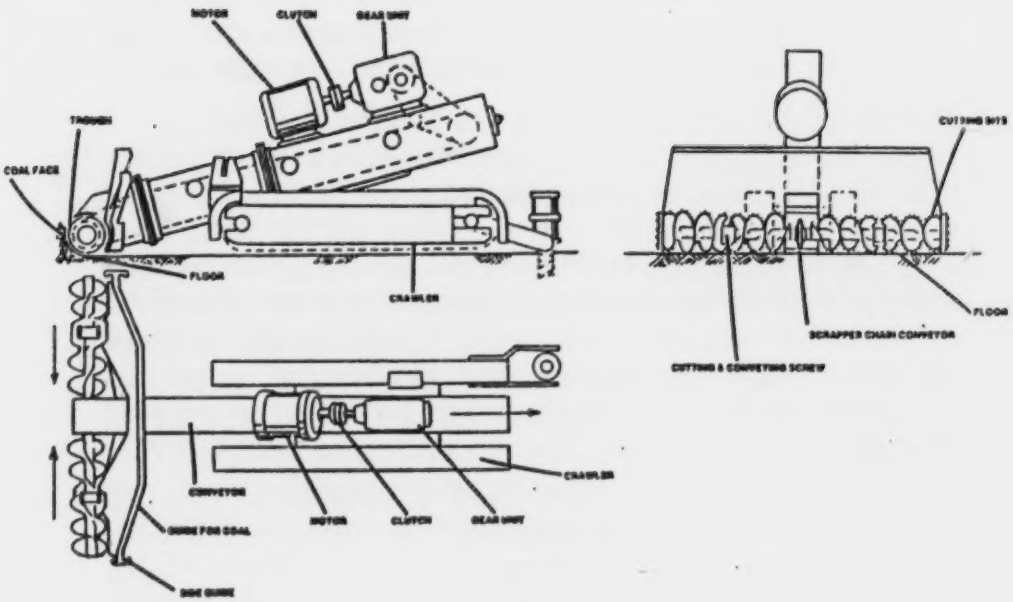
East German Patent No. 20,646 to Seidelbach teaches a miner that cuts from the floor of a mine. Helical cutters act as augers to convey cut material inward to a central conveyor.

SEIDELBACH



Von Hippel was considered by the Patent and Trademark Office ("PTO") during prosecution of the application on which the White patent issued; Newton et al. and Seidelbach were not. The trial court also considered several other prior art patents, as well as mining machines marketed by Jeffrey before White's date of invention.

DISTRICT COURT

The ultimate questions of obviousness, anticipation, and infringement were submitted in the form of special interrogatories to the jury, which resolved those questions in favor of White. The jury did not make any findings regarding scope and content of the prior art, differences between the prior art and the claimed invention, or level of ordinary skill in the art.[4] In response to Jeffrey's motion for judgment notwithstanding the verdict, the court said, "if the question of obviousness is one of law, the Court adopts the answers to the interrogatories by the jury on that issue."

ANALYSIS

It is necessary first to treat Jeffrey's argument that the court below erred in failing to make an *independent* evaluation of the question of obviousness. Jeffrey argues that the judge improperly submitted this question of law to the jury and adopted its conclusion as his own, without the benefit of underlying findings of fact.

The Supreme Court, in *Graham* v. *John Deere Co.*, 383 U.S. 1, 17 (1966), said that, although the ultimate question of patent validity is one of law, the question of obviousness "lends itself to several basic factual inquiries. Under [35 U.S.C.] § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the

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[4] Interrogatory 4 to the jury reads:

> Would the difference between the mining machine as defined in Claims 1, 12 or 13 of the White '680 patent in suit and the prior art have been obvious at the time of White's alleged invention to a person having ordinary skill in the mining or mining machinery art?

Two other interrogatories, numbered 9 and 10, related to unspecified new and unexpected results and functions of the claimed elements and combinations. Insofar as the *claimed* invention is concerned, they remain unspecified on this appeal. *See* note 6, *infra,* and subsequent textual discussion. White has relied only on the jury's answer to interrogatory 4 on the obviousness issue.

pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined." We note that the Ninth Circuit recently held that, in a jury trial, these questions must be submitted to the jury, "preferably by detailed special interrogatories," and that "[t]he court must, in all cases, determine obviousness as a question of law *independent* of the jury's conclusion." *Sarkisian* v. *Winn-Proof Corp.*, 688 F.2d 647, 650-51 (9th Cir. 1982) (emphasis supplied). It is our view that it is incumbent on the trial court to independently rule on the question of obviousness, taking into consideration all of the evidence bearing on the question.

In this case, because of the absence of findings by the jury related above, the court's "adoption" of the jury's conclusion of unobviousness is not an independent determination of that legal issue. In the absence of such findings on which such a conclusion can be reviewed, it would, ordinarily, be appropriate to remand the case for factual findings. However, it appears that the parties are in substantial agreement on the facts bearing on the question of obviousness. The relevant prior art is embodied in the Von Hippel patent, the Newton et al. patent, the Seidelbach patent, and the other patents before the court, as well as the mining machines marketed by Jeffrey before White made his invention. White acknowledges in his brief that "[t]he scope and content of the prior art as cited by Defendants is not an issue." Likewise, the level of ordinary skill in the art is not a point of serious disagreement. Jeffrey proposes that "[t]he tools that the man of ordinary skill had available to him are shown in the patents, publications and prior art machines." White suggests that the level of ordinary skill in the art is best determined by the types of mining machines that were on the market at the time the invention was made, but he does not contest Jeffrey's statement regarding the "tools available" to a person of ordinary skill in the art. Finally, White's expert witness Flanagan and Jeffrey's expert witness Starkey agreed in many respects in their evaluation of the differences

between the claimed invention and the prior art.[5] Accordingly, we will, in the interest of judicial economy, consider the obviousness of claims 1, 12, and 13. *See Dual Manufacturing & Engineering, Inc.* v. *Burris Industries, Inc.*, 619 F.2d 660, 666-67, 205 USPQ 1157, 1163-64 (7th Cir.) (en banc), *cert. denied*, 449 U.S. 870 (1980).

Claim 1

White does not contest that Newton et al. disclose a mining machine with a shaft, a helix with cutting elements on the edge, means to drive the shaft, a rigid scavenger board opposite the vein coextensive with the helix, bearings, and a mechanical connection that moves the scavenger board laterally with the shaft. The only difference argued[6] is that the Newton et al. machine does not move the helix *laterally* into the vein of coal. However, it is clear that the helical cutters at the end of the arms of the Newton et al. machine cut with their edges (as opposed to their ends) in the same manner as the machine disclosed in the White patent, which specifies that the cutter is moved "broadside into the vein of coal." Moreover, when cutting, the Newton et al. cutters move into the coal at an angle of approximately 90° to the axis of the shaft. The cutters do not move in a *straight line* into the coal, but describe an arcuate path as the two arms swing together. For this reason, White argues, the cutters are not moved *laterally* into the vein of coal. White cites no expert testimony to support this argued distinction. However, even if we were to assume that bare novelty is thus imparted to the claim 1 invention, the missing limitation is clearly taught by both Von Hippel and Seidelbach. White acknowledges that the Von Hippel miner moves laterally into the vein of coal to cut the latter, but argues that the Seidelbach machine will not move laterally into a vein of coal because it is

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[5] White argues that the court must view the evidence in the light most favorable to the party for whom the jury found and must give that party the benefit of all reasonable inferences from the evidence in his favor, citing *Lavender* v. *Kurn*, 327 U.S. 645 (1946). The flaw in this argument is that the jury made no findings of fact on the record relating to the question of obviousness.

[6] White also argues several "differences" that are not found in the claim.

a floor-cutting machine. However, the machine, according to the uncontradicted testimony of Starkey, will move into the face of the coal. Moreover, the patent explains that the Seidelbach machine is used to undercut the face of the coal and cause the coal located above the screw to give way and fall down. It is apparent that the cutter must move laterally into the vein of coal to accomplish this. Jeffrey's prior 120 heliminer also shows the feature of moving side-cutting helices laterally into a vein of coal.

White advances several arguments regarding unobviousness that are unconvincing. That the references fail to disclose a helix that moves laterally into coal and then vertically to dislodge coal at different elevations is irrelevant, because a vertically movable mining head is not required by the claims. That Newton et al. require screw conveyors to move the coal from the helices to the central conveyor is, likewise, irrelevant, because the claims do not rule out additional elements, such as the screw conveyor. That Jeffrey's miner enjoyed commercial success does not prove unobviousness, because the Jeffrey machine included several features not disclosed or claimed in the White patent. Indeed, the designer of the Jeffrey 101MC, which is the alleged infringing device, obtained a patent on his device. Each of the claims in that patent includes limitations directed to features that are found in the 101MC but are neither disclosed nor claimed in the White patent. White's evidence relating to recognition of his invention by those skilled in the art as an important improvement is not directed to the machine defined by the claims in issue.

In view of the foregoing, we hold that the invention defined by claim 1 would have been obvious to a person of ordinary skill in the art at the time the invention was made.

Claim 12

Claim 12 includes most of the limitations of claim 1. In addition, it requires that the scavenger board comprise "a pair of overlapping flat plates vertically slidably connected to each other." Newton et al. disclose a scavenger board comprising a pair of overlapping flat plates. White argues that the Newton et al. plates are not "vertically slidably connected" because they

are connected only by a flap on one plate that is biased against the other plate. Jeffrey correctly points out that the plates in the 101MC miner are connected in the same manner—a flap at the edge of one plate is hinged and biased against the other. White cannot argue that this type of "slidably connected" plate does not meet the claim language when in a prior art reference, but does meet the claim language when in the accused device. In any event, this minor distinction, if distinction it is, is merely a design expedient. White asserts no advantages that flow from his (as opposed to Newton et al.'s) design, but, rather, merely argues that this serves to impart *novelty* to the claimed invention.

Claim 12 contains the further limitation that the scavenger board forms a trough with the floor of the mine and the vein of coal in which the helix acts as an auger to move coal toward the end of the trough. White's argument that the Newton et al. machine does not satisfy this limitation is belied by the express language of the patent: "the scrolls 34 [helices] will advance the mined material . . . into the paths of the screw conveyors 85." Furthermore, White admits that Seidelbach and Von Hippel satisfy this limitation.

Thus, the prior art clearly teaches the combination of the claimed elements. In view of these teachings, we hold that the invention of claim 12 would have been obvious to a person of ordinary skill in the art at the time the invention was made.

Claim 13

This claim differs from claim 12 slightly, requiring that the scavenger board comprises "relatively vertically movable elements." There is no requirement that the parts thereof be "connected to each other" as there is in claim 12. Accordingly, this limitation is unquestionably met by Newton et al. Claim 13

also requires that the lower edge of the blade rests on the floor of the mine, a limitation that is met by Newton et al., Seidelbach, and Von Hippel. Accordingly, this claim is invalid for obviousness for the same reasons as is claim 12.

In view of the foregoing, the decision of the district court is reversed and the award of damages is vacated.[7]

REVERSED

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[7] Because our resolution of the obviousness issue is dispositive, it is unnecessary to reach the other arguments raised by appellants.

APPENDIX B

IN THE
UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

LETCHER T. WHITE,

Appellee,

v.

JEFFREY MINING MACHINERY COMPANY,
JEFFREY GALION, INC.,
and DRESSER INDUSTRIES, INC.,

Appellants.

Appeal No. 83-640.

DECIDED: December 7, 1983

Before DAVIS, *Circuit Judge,* NICHOLS,* *Senior Circuit Judge,* and MILLER, *Circuit Judge.*

MILLER, *Circuit Judge.*

This is an appeal from the United States District Court for the Eastern District of Kentucky. Plaintiff-appellee White sued Jeffrey Mining Company, et al. ("Jeffrey") for infringement of claims 1, 12, and 13 of his United States Patent No. 3,524,680[1] for a mining machine. After a jury trial, the patent claims in issue were held valid and found infringed. The jury awarded White $8 million, which was increased to $12 million by the trial judge. Jeffrey's motions for judgment notwithstanding the verdicts and for a new trial were denied. We reverse on the validity of the patent claims and vacate the award of damages. The issue of infringement is not raised on the appeal.

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* Judge Nichols assumed senior status effective October 1, 1983.

[1] Issued August 18, 1970, on application No. 769,574, filed October 22, 1968, for "Mining Machine Having Spiral Cutters With Scavenger Board."

BACKGROUND

White originally brought suit in 1974 against Jeffrey for infringement and for unfair competition arising from development and sale of Jeffrey's 101MC mining machine. Claim 1 is illustrative:

> A mining machine comprising
>
> a shaft
>
> having a helix thereon
>
> provided along the edge thereof at spaced points with cutting elements,
>
> means for driving said shaft,
>
> means for applying force laterally of said shaft at spaced points therealong to move it laterally into a vein of coal to cut the latter,
>
> a rigid scavenger board at the side of said helix opposite the vein of coal and longitudinally coextensive with said helix,
>
> and bearings for said shaft
>
> having mechanical connection with said scavenger board whereby the latter moves laterally with said shaft.

Claim 12[2] further defines the scavenger board as a pair of

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[2] Claim 12 provides:

> A mining machine comprising
>
> a shaft
>
> having a helix thereon
>
> provided along the edge thereof at spaced points with cutting elements,
>
> means for driving said shaft,
>
> means for applying force laterally to said shaft at spaced points therealong to move it laterally into a vein of coal to cut the latter,

(footnote continues)

overlapping flat plates vertically slidably connected to each other, the board forming with the floor of the mine and the vein of coal a trough in which the helix acts as an auger conveyor to move coal endwise of the trough. Claim 13[3] requires that the scavenger board comprises relatively vertically movable elements having a lower edge resting on the floor of the mine.

(footnote continued)

a scavenger board arranged at the side of said helix opposite the vein of coal,

said scavenger board comprising a pair of overlapping flat plates vertically slidably connected to each other,

the upper of said plates having mechanical connection with said shaft to move therewith as said helix advances into the vein of coal,

said scavenger board forming with the floor of the mine and the vein of coal a trough in which said helix acts as an auger conveyor to move coal endwise of said trough.

[3] Claim 13 provides:

A mining machine comprising

a shaft

having a helix thereon

provided along the edge thereof at spaced points with cutting elements,

means for driving said shaft,

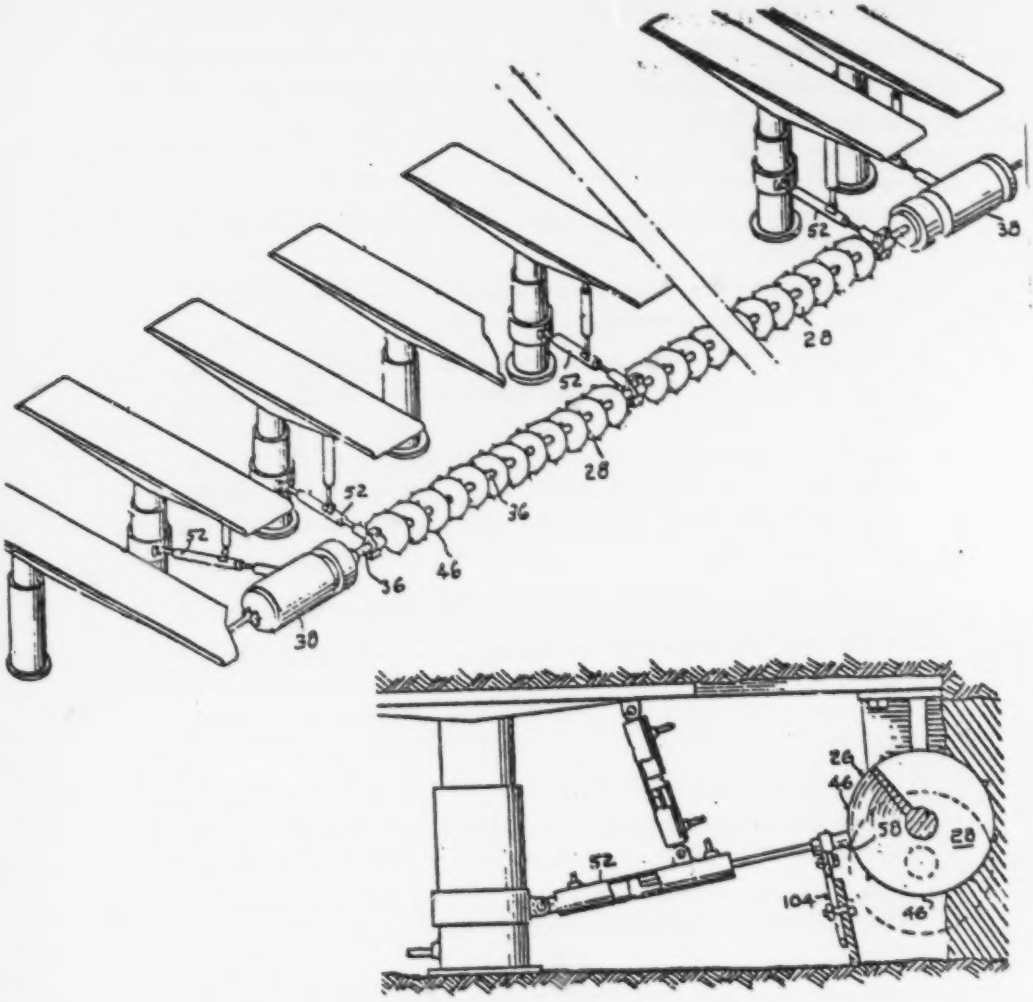
means for applying force laterally to said shaft at spaced points therealong to move it laterally into a vein of coal to cut the latter,

and a scavenger board comprising relatively vertically movable elements and having a lower edge resting on the floor of the mine,

said scavenger board, the floor of the mine and the vein of coal forming a trough in which said helix acts as an auger conveyor to move coal longitudinally of said trough,

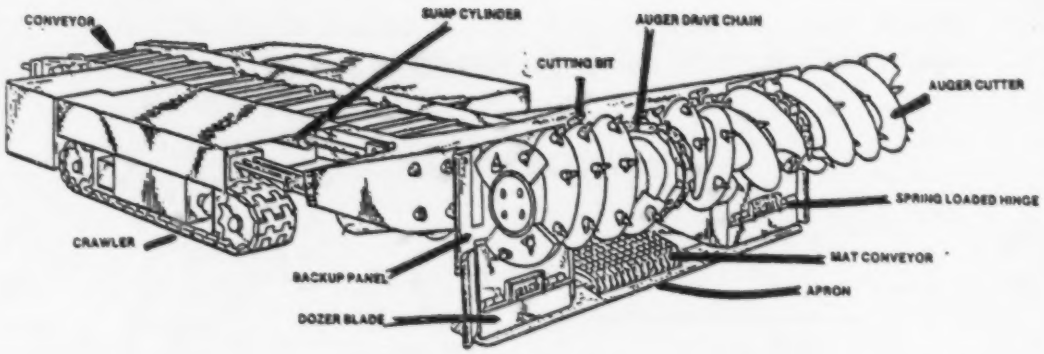
said scavenger board having mechanical connection with said shaft and with said means for applying lateral force to said shaft whereby said scavenger board will be moved with said shaft as the latter advances to cut into the vein of coal.

The White invention is illustrated in the patent, thus:



Shaft 36 has a *helix* 28 thereon with *cutting elements* 46 provided at spaced points. Motors 38 provide *means for driving* the shaft. Hydraulic rams 52 apply *lateral force* to move the helix laterally into a vein of coal. A *scavenger board* 104 is on the side of the helix opposite the vein of coal and forms with the floor of the mine and the vein of coal a *trough* in which the helix acts as an *auger conveyor* to move coal endwise of the trough. The illustrated embodiment is a "longwall miner."

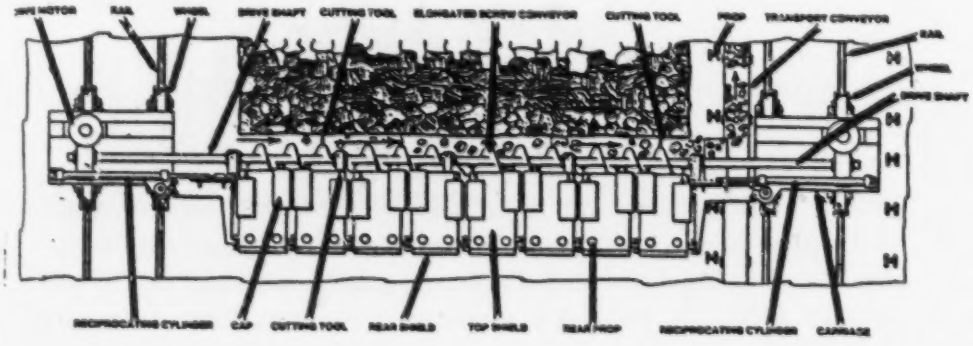
The accused 101MC miner is illustrated as follows:



THE PRIOR ART

United States Patent No. 3,445,139 to Von Hippel teaches a longwall miner having a helical cutter that acts as an auger to move coal endwise of the helix, as shown below:

VON HIPPEL



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United States Patent No. 3,161,439 to Newton et al. discloses a continuous miner having a helical cutter on the end of each of two arms. When cutting, the arms swing in an arc from the position shown in figure A to that shown in figure B. The cut coal is confined by a cuttings confining plate and a scraper blade (see figure C). The helical cutters "advance the mined material rearwardly" into the path of the screw conveyors that, in turn, move it to the central conveyor. A subsequent cut would follow the dotted line in figure B.

NEWTON ET AL.

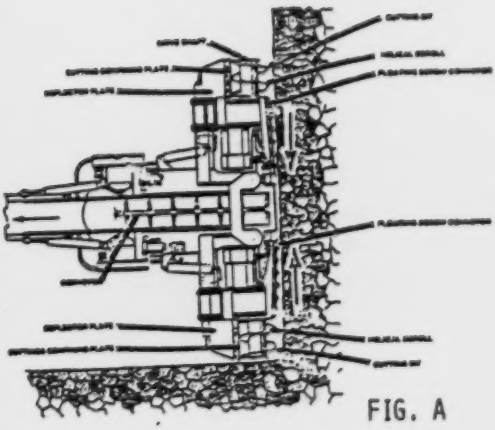


FIG. A

FIG. B

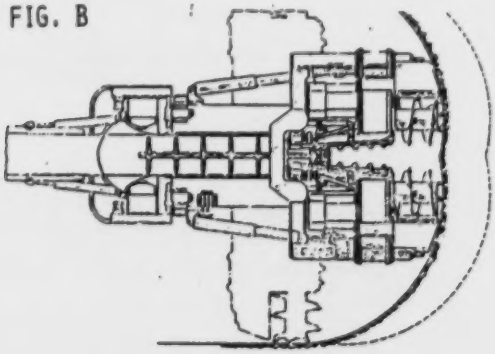
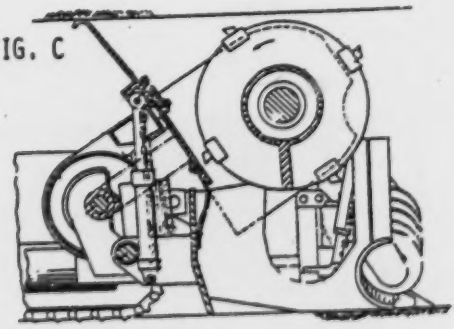


FIG. C



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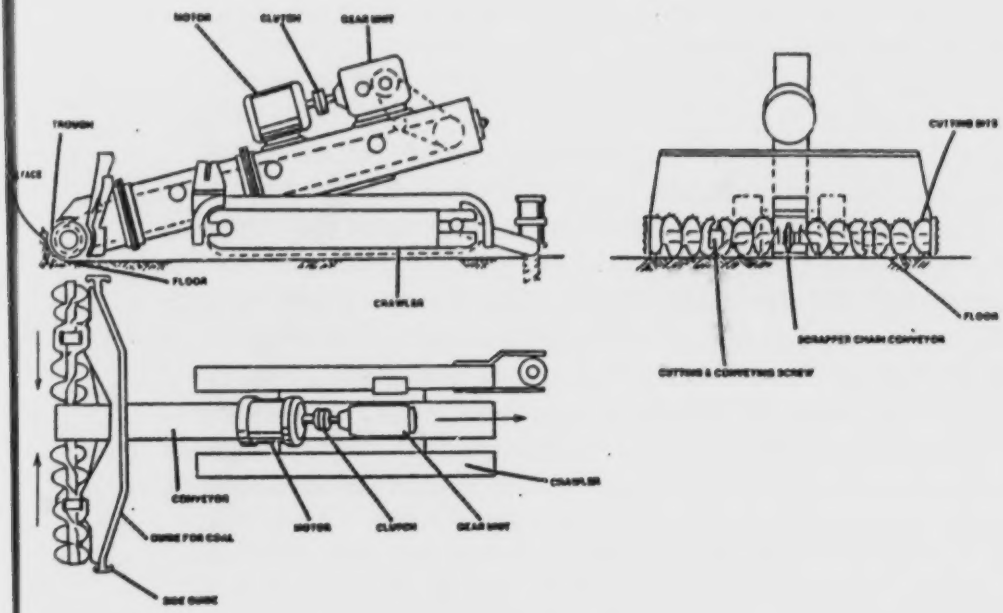
East German Patent No. 20,646 to Seidelbach teaches a miner that cuts from the floor of a mine. Helical cutters act as augers to convey cut material inward to a central conveyor.

SEIDELBACH



Von Hippel was considered by the Patent and Trademark Office ("PTO") during prosecution of the application on which the White patent issued; Newton et al. and Seidelbach were not. The trial court also considered several other prior art patents, as well as mining machines marketed by Jeffrey before White's date of invention.

DISTRICT COURT

The questions of obviousness, anticipation, and infringement were submitted in the form of special interrogatories to the jury, which resolved those questions in favor of White in the form of several individual verdicts. The jury did not return a general verdict and did not state any findings regarding scope and content of the prior art, differences between the prior art and the claimed invention, or level of ordinary skill in the art.[4] In response to Jeffrey's motions for judgment notwithstanding the verdicts, the court said: "if the question of obviousness is one of law, the Court adopts the answers to the interrogatories by the jury on that issue."[5]

ANALYSIS

It is necessary first to treat Jeffrey's argument that the court below erred in failing to make an *independent* evaluation of the question of obviousness. Jeffrey argues that the judge improperly submitted this question of law to the jury and adopted its conclusion as his own, without the benefit of underlying findings of fact. The argument is without merit. Submission of such a question of law to a jury, accompanied by appropriate instructions, is proper. *Connell* v. *Sears, Roebuck & Co.,* Nos.

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[4] Interrogatory 4 to the jury reads:

> Would the difference between the mining machine as defined in Claims 1, 12 or 13 of the White '680 patent in suit and the prior art have been obvious at the time of White's alleged invention to a person having ordinary skill in the mining or mining machinery art?

Two other interrogatories, numbered 9 and 10, related to unspecified new and unexpected results and functions of the claimed elements and combinations. Insofar as the *claimed* invention is concerned, they remain unspecified on this appeal. *See* note 7, *infra,* and subsequent textual discussion. White has relied only on the jury's answer to interrogatory 4 on the obviousness issue.

[5] However, interrogatories to juries should be directed to facts, not to questions of law such as obviousness, fraud, and claim interpretation, which constitute the basis for instructions to the jury to guide it in reaching its conclusions of law.

83-841 and 83-842 (Fed. Cir. November 23, 1983). Moreover, we are satisfied that the trial court effectively ruled on the question of obviousness by its disposition of Jeffrey's motions for judgment notwithstanding the verdicts and for a new trial. However, as related above, there is an absence of stated findings on which a conclusion of obviousness can be reviewed. Nonetheless, it appears that the parties are in substantial agreement on the facts bearing on the question of obviousness. The relevant prior art is embodied in the Von Hippel patent, the Newton et al. patent, the Seidelbach patent, and the other patents before the court, as well as the mining machines marketed by Jeffrey before White made his invention. White acknowledges in his brief that "[t]he scope and content of the prior art as cited by Defendants is not an issue." Likewise, the level of ordinary skill in the art is not a point of serious disagreement. Jeffrey proposes that "[t]he tools that the man of ordinary skill had available to him are shown in the patents, publications and prior art machines." White suggests that the level of ordinary skill in the art is best determined by the types of mining machines that were on the market at the time the invention was made, but he does not contest Jeffrey's statement regarding the "tools available" to a person of ordinary skill in the art. Finally, White's expert witness Flanagan and Jeffrey's expert witness Starkey agreed in many respects in their evaluation of the differences between the claimed invention and the prior art.[6] Accordingly, we will, in the interest of judicial economy, consider the obviousness of claims 1, 12, and 13. *See Dual Manufacturing & Engineering, Inc.* v. *Burris Industries, Inc.*, 619 F.2d 660, 666-67, 205 USPQ 1157, 1163-64 (7th Cir.) (en banc), *cert. denied,* 449 U.S. 870 (1980).

[6] White argues that the court must view the evidence in the light most favorable to the party for whom the jury found and must give that party the benefit of all reasonable inferences from the evidence in his favor, citing *Lavender* v. *Kurn*, 327 U.S. 645 (1946). The flaw in this argument is that the jury was not here required to evaluate the question of obviousness in light of the invention *as claimed*, so that the rule in *Lavender* cannot aid White.

Claim 1

White does not contest that Newton et al. disclose a mining machine with a shaft, a helix with cutting elements on the edge, means to drive the shaft, a rigid scavenger board opposite the vein coextensive with the helix, bearings, and a mechanical connection that moves the scavenger board laterally with the shaft. The only difference argued[7] is that the Newton et al. machine does not move the helix *laterally* into the vein of coal. However, it is clear that the helical cutters at the end of the arms of the Newton et al. machine cut with their edges (as opposed to their ends) in the same manner as the machine disclosed in the White patent, which specifies that the cutter is moved "broadside into the vein of coal." Moreover, when cutting, the Newton et al. cutters move into the coal at an angle of approximately 90° to the axis of the shaft. The cutters do not move in a *straight line* into the coal, but describe an arcuate path as the two arms swing together. For this reason, White argues, the cutters are not moved *laterally* into the vein of coal. White cites no expert testimony to support this argued distinction. However, even if we were to assume that bare novelty is thus imparted to the claim 1 invention, the missing limitation is clearly taught by both Von Hippel and Seidelbach. White acknowledges that the Von Hippel miner moves laterally into the vein of coal to cut the latter, but argues that the Seidelbach machine will not move laterally into a vein of coal because it is a floor-cutting machine. However, the machine, according to the uncontradicted testimony of Starkey, will move into the face of the coal. Moreover, the patent explains that the Seidelbach machine is used to undercut the face of the coal and cause the coal located above the screw to give way and fall down. It is apparent that the cutter must move laterally into the vein of coal to accomplish this. Jeffrey's prior 120 heliminer also shows the feature of moving side-cutting helices laterally into a vein of coal.

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[7] White also argues several "differences" that are not found in the claim.

White advances several arguments regarding unobviousness that are unconvincing. That the references fail to disclose a helix that moves laterally into coal and then vertically to dislodge coal at different elevations is irrelevant, because a vertically movable mining head is not required by the claims. That Newton et al. require screw conveyors to move the coal from the helices to the central conveyor is, likewise, irrelevant, because the claims do not rule out additional elements, such as the screw conveyor. That Jeffrey's miner enjoyed commercial success does not support an implication that the jury found that a nexus existed between such success and the claimed invention, because the Jeffrey machine included several features not disclosed or claimed in the White patent. Indeed, the designer of the Jeffrey 101MC, which is the alleged infringing device, obtained a patent on his device, the claims of which include limitations directed to features that are found in the 101MC but are neither disclosed nor claimed in the White patent. White's evidence relating to recognition of his invention by those skilled in the art as an important improvement is not directed to the machine defined by the claims in issue.

In view of the foregoing, we hold that the jury could not reasonably have concluded that the invention defined by claim 1 would have been unobvious to a person of ordinary skill in the art at the time the invention was made.

Claim 12

Claim 12 includes most of the limitations of claim 1. In addition, it requires that the scavenger board comprise "a pair of overlapping flat plates vertically slidably connected to each other." Newton et al. disclose a scavenger board comprising a pair of overlapping flat plates. White argues that the Newton et al. plates are not "vertically slidably connected" because they are connected only by a flap on one plate that is biased against the other plate. Jeffrey correctly points out that the plates in his 101MC miner are connected in the same manner—a flap at the edge of one plate is hinged and biased against the other. White cannot argue that this type of "slidably connected" plate does not meet the claim language when in a prior art reference, but does meet the claim language when in the accused device. In

any event, this minor distinction, if distinction it is, is merely a design expedient. White asserts no advantages that flow from his (as opposed to Newton et al.'s) design, but, rather, merely argues that this serves to impart *novelty* to the claimed invention.

Claim 12 contains the further limitation that the scavenger board forms a trough with the floor of the mine and the vein of coal in which the helix acts as an auger to move coal toward the end of the trough. White's argument that the Newton et al. machine does not satisfy this limitation is belied by the express language of the patent: "the scrolls 34 [helices] will advance the mined material . . . into the paths of the screw conveyors 85." Furthermore, White admits that Seidelbach and Von Hippel satisfy this limitation.

Thus, the prior art clearly suggests the claimed combination. Accordingly, we hold that the jury could not reasonably have concluded that the invention defined by claim 12 would have been unobvious to a person of ordinary skill in the art at the time the invention was made.

Claim 13

This claim differs from claim 12 slightly, requiring that the scavenger board comprise "relatively vertically movable elements." This limitation is unquestionably met by Newton et al. Claim 13 also requires that the lower edge of the blade rest on the floor of the mine, a limitation that is met by Newton et al., Seidelbach, and Von Hippel. Accordingly, this claim is invalid for obviousness for the same reasons that pertain to claim 12.

In view of the foregoing, the refusal of the district court to grant Jeffrey's motions for judgment notwithstanding the verdicts is reversed, and the award of damages is vacated.[8]

REVERSED

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[8] Because our resolution of the obviousness issue and its effect on the refusal of the motions for judgments NOV is dispositive, it is unnecessary to reach other arguments raised by appellants.